

Chapter 7

Description of Impacted Native American Resources in the Engineering Sciences and Applications Division

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BACKGROUND FOR THE ESA ASSESSMENT

The ESA Division is located in the southwestern portion of LANL property (Figure 7.1). ESA ranges from an elevation of 6,800 ft to 7,800 ft and incorporates approximately 3.5 square miles of land. The eastern edge is bordered by the intersection of Water Canyon and Cañon de Valle. State Route 4 travels along part of the southern edge and State Route 501 on the western edge. Vegetation within this area is comprised of a ponderosa pine forest with some piñon and juniper throughout the area. ESA incorporates TA-11, -16, -28, and -37. There are many archeological sites that exist within the ESA boundary; however, because they exist within ESA does not mean that all of the sites burned. Only those sites that exist in ESA within the Cerro Grande Fire boundary are addressed in this chapter (Table 7.1). Details about the damage each site sustained, the specific effects of the fire, and general information about these sites are included below for those sites identified as Archaic period and Ancestral Pueblo Native American, as well as those sites of unknown age. Historic period (non-Native American) sites are discussed in Chapters 11 and 12.

The Cerro Grande Fire burned the majority of the land in ESA. The burn severity ranges between none, low, moderate, and severe in some places. Small spot fires in the ESA area began on May 7 and continued through May 10, 2000. On May 10, larger portions of ESA burned uncontrollably; subsequently, by May 11, 2000, 95% of ESA had burned.

ASSESSMENT OF FIRE-IMPACTED PREHISTORIC AND TEMPORALLY UNPLACED SITES IN ESA

LANL archaeologists revisited archaeological sites in ESA after the Cerro Grande Fire occurred in May 2000. Each site was revisited to assess the damage that the fire or fire-related activities may have inflicted (Table 7.2). The purpose of the CGFA Project was to determine which sites needed stabilization or treatment to protect remaining archaeological resources.

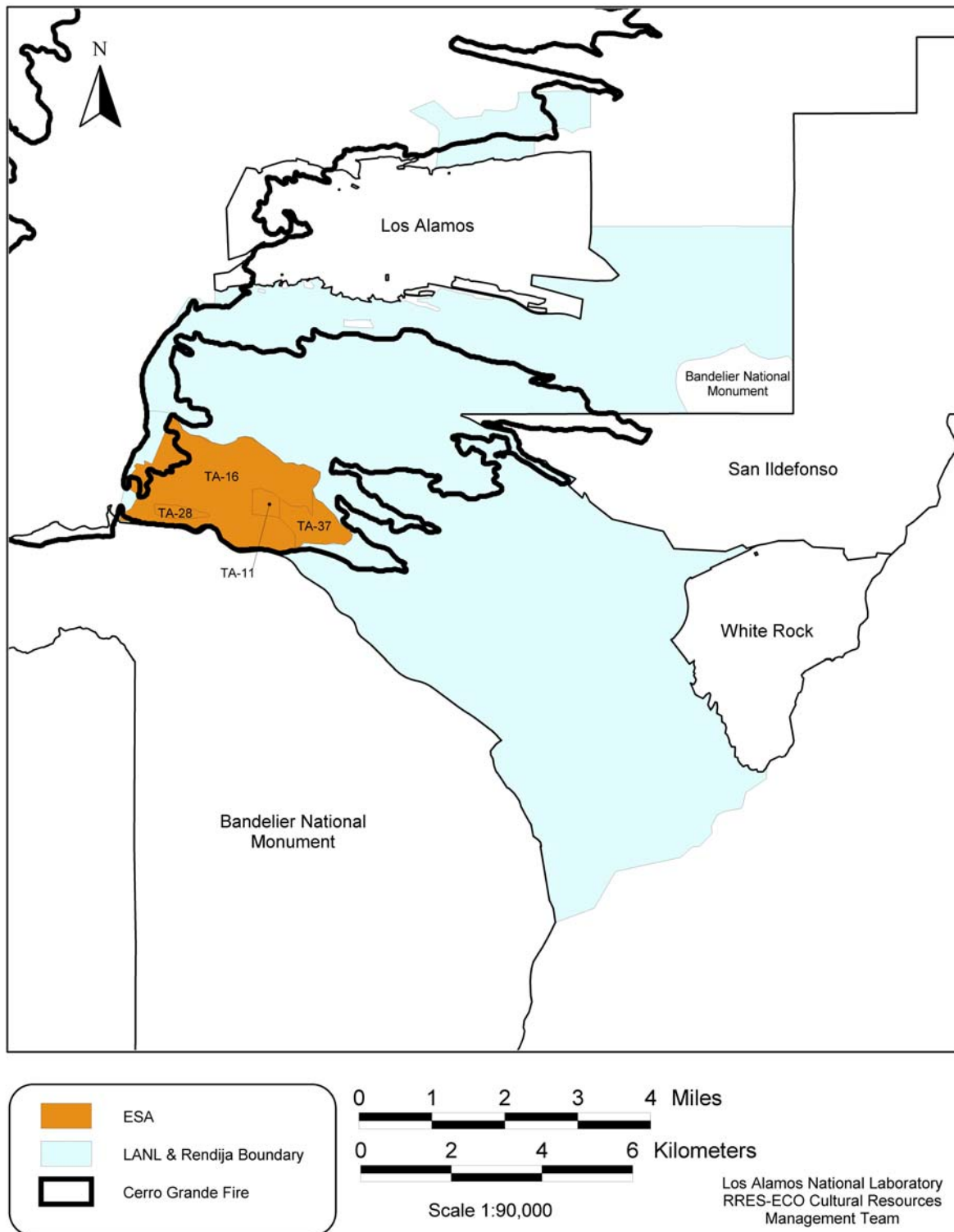


Figure 7.1. Map of Engineering Sciences and Applications Division (ESA).

Table 7.1. All Assessed Sites in ESA by Technical Area.

Technical Area	LA Number	Site Type	Period/ Phase	Impacted by Cerro Grande	Non-Fire Impacts	Treatment	Comments
11	12656	Roomblock	Unidentified	No	No		
11	86659	1-3 room structure	Ancestral Pueblo	Yes	No	Yes	Wattles
16	136667	Lithic scatter	Archaic	Yes	No	No	FMU-80
16	201	1-3 room structure					Not relocated
16	204	1-3 room structure	Ancestral Pueblo	Yes	Yes	No	None
16	15854	Roomblock	Coalition	Yes	No	Yes	None
16	15855	Roomblock	Coalition	Yes	No	No	None
16	15856	Roomblock	Coalition	Yes	Yes	No	None
16	15857	Roomblock	Coalition	Yes	No	No	None
16	15858	1-3 room structure	Ancestral Pueblo	Yes	No	No	None
16	15859	1-3 room structure	Ancestral Pueblo	Yes	No	No	None
16	16807	Homestead	Homestead	Yes	Yes	Yes	Discussed in Chap. 12
16	21299	1-3 room structure	Classic	Yes	No	No	None
16	21300	Artifact scatter	Ancestral Pueblo	Yes	No	No	None
16	21333	Rock feature	Ancestral Pueblo	Yes	No	No	None
16	21367	Lithic scatter	Archaic	Yes	No	No	None
16	21368	Lithic scatter	Archaic	Yes	Yes	No	None
16	21369A	Lithic scatter	Archaic	Yes	No	No	None
16	21369B	Historic scatter	Unidentified Historic	Yes	No	No	Discussed in Chap. 12
16	21370	Rock feature	Unidentified Prehistoric	Yes	No	No	None
16	21371	Lithic scatter					Not relocated
16	86648	Lithic scatter	Unidentified Prehistoric	None	No	No	None
16	86649	Lithic scatter	Archaic	Yes	No	No	None
16	86650A	Cavate	Ancestral Pueblo	Yes	No	No	None
16	86650B	Cavate					Not relocated
16	86650C	Cavate					Not relocated
16	86651	1-3 room structure	Ancestral Pueblo	Yes	Yes	Yes	Wattles
16	86652	1-3 room structure	Ancestral Pueblo	Yes	Yes	Yes	Monitor
16	86653	1-3 room structure	Ancestral Pueblo	Yes	No	No	None
16	86654A	1-3 room structure	Ancestral Pueblo	Yes	Yes	No	None
16	86654B	Grid garden	Ancestral Pueblo	Yes	No	No	None
16	86655	1-3 room structure	Ancestral Pueblo	Yes	No	No	None
16	86656	1-3 room structure	Coalition	Yes	No	No	None
16	86657	Roomblock	Coalition	Yes	No	No	None
16	86660	1-3 room structure	?	Yes	No	Yes	Monitor erosion
16	86661	“check dam”					Not a Site
16	86662	1-3 room structure	Coalition	Yes	No	No	None
16	86663	1-3 room structure	Ancestral Pueblo	None	No	No	None
16	86687	1-3 room structure	Ancestral Pueblo	Yes	No	No	None

Table 7.1. (cont.)

Technical Area	LA Number	Site Type	Period/ Phase	Impacted by Cerro Grande	Non-Fire Impacts	Treatment	Comments
16	86688	1-3 room structure	Classic	Yes	No	Yes	Data recovery
16	86689	Rock art and rock feature	Ancestral Pueblo	Yes	No	No	None
16	86690	Rock art	Ancestral Pueblo	None	No	No	None
16	87426	Lithic scatter	Archaic	Yes	Yes	No	Excelsior netting
16	87427	Lithic scatter	Archaic	Yes	Yes	Yes	Fence site, monitor
16	109616	Lithic scatter	Archaic	None	No	No	None
16	122031	Lithic scatter	Archaic	Yes	No	Yes	Remove snags
16	126547	Rock art	Ancestral Pueblo	Yes	No	No	None
16	136905	Roomblock	Ancestral Pueblo	Yes	No	No	None
16	136879	Lithic scatter	Unidentified prehistoric	Yes	No	No	None
16	136880	Artifact scatter	Cold War	Yes	No	No	No
16	136820	Artifact scatter	Cold War	Yes	No	No	None
16	136830	Artifact scatter	Cold War	Yes	No	No	No
16	136841	Artifact scatter	Cold War	Yes	No	No	No
16	136851	Trail/ Stairs	Unidentified	Yes	No	No	No
28	202	1-3 room structure					Not relocated
28	203	Roomblock					Not relocated
37	4653A	Roomblock	Coalition	Yes	No	Yes	Remove snag
37	4653B	1-3 room structure	Coalition	Yes	No	Yes	Remove snag and fallen tree
37	4654A	Roomblock	Coalition	Yes	No	Yes	Remove snag
37	4654B	Roomblock	Coalition	Yes	No	Monitor	Snags-damage structure
37	4654C	Rock art	Ancestral Pueblo	Yes	No	No	None
37	4655A	Roomblock	Coalition	None	No	No	None
37	4655B	Artifact scatter					Not a site
37	12655	Plaza pueblo	Coalition	Yes	No	Yes	Wattles
37	30636	Game pit and rock art	Unidentified prehistoric	None	No	No	None
37	86658	1-3 room structure	Ancestral Pueblo	None	No	No	None
37	86693	Artifact scatter					Not a site
37	110139	Rock art					Not relocated
37	"L100"	Rock feature					Not a site

Table 7.2. Prehistoric and Temporally Unplaced Sites in ESA that were Directly Impacted by the Cerro Grande Fire.

Technical Area	LA Number	Degree of Burn	Cracking or spalling on masonry	Smoke or soot damage on masonry	Stump or root holes on or adjacent to masonry	Additional stump or root holes in site area	Loss of architectural wood or features	Fallen tree(s) on walls or rubble	Snags/partial burned trees that can damage structures	Additional snags/partial burned trees in site area	Other	Suppression	Rehabilitation	Enhanced erosion
11	86659	Moderate	Yes	No	Yes	Yes	No	No	Yes	Yes	No	No	Yes	No
16	204	Moderate	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes	Yes
16	15854	Moderate	Yes	No	No	No	No	No	No	No	No	No	No	No
16	15855	Moderate	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No
16	15856	Low	No	No	Yes	Yes	No	No	No	No	No	No	No	Yes
16	15857	Low	No	No	No	No	No	No	No	Yes	No	No	No	No
16	15858	Severe	Yes	No	No	No	No	No	Yes	Yes	No	No	No	No
16	15859	Low	No	No	Yes	Yes	No	No	No	No	No	No	No	No
16	21299	Low	Yes	Yes	No	No	No	No	No	No	No	No	No	No
16	21300	Low	No	No	No	No	No	No	No	Yes	No	No	No	No
16	21333	Moderate	No	No	Yes	Yes	No	No	No	No	No	No	No	No
16	21367	Low	No	No	Yes	Yes	No	No	No	No	No	No	No	No
16	21368	Low	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
16	21369A	Moderate	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No
16	21370	Low	No	Yes	Yes	Yes	No	No	No	Yes	No	No	No	No
16	86649	Severe	No	No	Yes	Yes	No	No	No	Yes	No	No	No	No
16	86650A	Moderate	No	No	No	No	No	No	No	Yes	No	No	No	No
16	86651	Moderate	No	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
16	86652	Severe	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes
16	86653	Moderate	No	No	No	No	No	No	No	Yes	No	No	No	No
16	86654A	Moderate	No	No	Yes	Yes	No	No	No	Yes	No	No	No	Yes
16	86654B	Moderate	No	No	No	No	No	No	No	Yes	No	No	No	No
16	86655	Severe	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	No
16	86656	Moderate	No	No	No	No	No	No	Yes	Yes	No	No	No	No
16	86657	Moderate	No	No	Yes	Yes	No	No	No	Yes	No	No	Yes	No
16	86660	Low	No	No	No	No	No	No	Yes	No	No	No	No	Yes
16	86662	Low	No	No	Yes	Yes	No	No	No	No	No	No	No	Yes
16	86687	Low	Yes	No	No	No	No	No	No	No	No	No	No	No
16	86688	Low	Yes	No	No	No	No	No	No	No	No	No	No	No
16	86689	Low	No	No	No	No	No	No	No	Yes	No	No	No	No
16	87426	Low	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes
16	87427	Low	No	No	Yes	Yes	No	No	No	No	No	Yes	Yes	Yes
16	122031	Moderate	No	No	Yes	Yes	No	No	Yes	Yes	No	No	Yes	No
16	126547	Low	No	No	No	No	No	No	No	No	No	No	No	No
16	136667	Low	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
16	136879	Low	No	No	No	No	No	No	No	No	No	No	No	No
16	136905	Moderate	Yes	Yes	Yes	Yes	No	No	No	Yes	No	No	No	No
37	4653A	Low	Yes	No	No	No	No	No	Yes	Yes	No	No	No	No
37	4653B	Low	No	No	No	No	No	Yes	Yes	No	No	No	No	No

Table 7.2. (cont.)

Technical Area	LA Number	Degree of Burn	Cracking or spalling on masonry	Smoke or soot damage on masonry	Stump or root holes on or adjacent to masonry	Additional Stump or root holes in site	Loss of architectural wood	Fallen tree(s) on walls or rubble	Snags/partial burned trees that can damage	Additional snags/partial burned trees in site area	Other	Suppression	Rehabilitation	Erosion
37	4654A	Moderate	Yes	No	No	No	No	Yes	Yes	Yes	No	No	No	No
37	4654B	Low	Yes	No	No	No	No	No	Yes	No	No	No	No	No
37	4654C	Low	No	No	No	No	No	No	No	No	No	No	No	No
37	12655	Moderate	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No	Yes	No

TA-11

LA 86659. This site consists of a small tuff block rubble mound representing a one-room structure. Alignments are visible on all sides of the site. The site is located in a ponderosa pine forest on a gentle northeasterly slope just north of the mesa ridge. Because no diagnostic artifacts were observed at the site, the occupation period is referred to as Ancestral Pueblo. Burn severity at this site is moderate. There was some cracking and spalling of masonry, smoke and soot damage, stump and root holes in the site area, and some partial burned trees in the site area that can damage the structure. Several cut trees are near the site, but it is unknown if these were cut down as immediate post-fire rehabilitation or as part of some other project. There were no suppression impacts to the site. It is recommended that two to three wattles be placed in the area to prevent erosion as treatment for this site.

TA-16

LA 204. The site consists of a two-room structure (6 m by 2.5 m, 1 m high) of well-shaped tuff blocks (Figure 7.2). The site is located on a very gentle east-facing slope just north of Water Canyon. The vegetation is dominated by ponderosa pines. This site is Ancestral Puebloan. The area around this site was moderately burned. There are four snags in the area and two stump holes, but these do not pose a threat to the site. Twenty percent of the masonry is soot damaged. There is a low-level threat from erosion at the site because duff in the area was burned off during the fire. Rehabilitation efforts have taken place near the site; there has been tree cutting in the area and excelsior matting has been placed south of the site. These activities do not seem to have negatively impacted the site.

Binzen field notes state, "Approximately forty years ago a survey was conducted in TA-16 and TA-28. Four sites were recorded. One of them, LA 204, has the same location on the ARMS [Archaeological Records Management System] map of the time as the small ruin described above. However, since the original form lacks specific data regarding the dimensions and artifact content of LA 204, and the locational accuracy is described as being 'poor,' there is a possibility that the larger neighboring ruin, LA 86657, may be the site originally recorded as LA 204. It is also possible that neither of these structures is LA 204. The closest possible match was made during the survey and has been used for the purposes of this report."



Figure 7.2. General view of LA 204, looking east-northeast.

LA 15854. This site consists of a long and narrow (26 m north-south by 10 m east-west, 1 m high) pueblo roomblock of roughly shaped tuff blocks and associated artifacts. This site is located on a flat mesa top in the northeast corner of a large open field area south of the TA-37 entrance gate. Vegetation consists mostly of short grass with stands of ponderosa pine, piñon, and juniper trees. This site contains numerous, highly visible alignments to the north and south. The artifact concentration measures 40 m north-south by 50 m east-west. Several types of ceramics and chipped stone were located in the site area. Observations of the ceramics date this site to the Coalition period. The area around the site was slightly burned, and there are several partially burned trees on and around the site. Twenty percent of the masonry is soot damaged and 10% is heat spalled. In the past there has been some churning of the midden soil by animals, creating a very low erosional threat.

LA 15855. The site is a multiple-feature pueblo roomblock that appears to have been partially excavated, but it is not known when or by whom. Feature A is a circular depression (4.3 m by 3.5 m, 0.35 m deep) that Steen (1982) and Binzen (n.d.) identify as a kiva depression. This feature was not observed during the CGFA Project. Feature B is a pueblo roomblock (28 m north-south by 10 m east-west, 2 m high) of shaped and unshaped tuff blocks. Feature C was originally identified as a small rock feature but was later identified as a backfill pile from the excavations. Feature C was not recorded during the CGFA Project. Feature D is a second pueblo roomblock (18 m north-south by 12 m east-west). Feature D is 25 m southwest of Feature B, and the entire site covers an area of about 7,700 m². The site is located on a flat mesa top at the edge of Water Canyon. Vegetation within the site area consists mostly of short grasses and scrub oak with a few ponderosa pine, piñon, and juniper trees present. Observations of the ceramics date this site to the Coalition period. The area around the site was moderately burned and there are

approximately 10 snags and partially burned trees in the area and several stump holes. These do not pose a threat to the site.

LA 15856. The site consists of two pueblo roomblocks. Feature A is a small rubble mound with several alignments visible (5 m north-south by 4.5 m east-west). Feature B is a linear roomblock (14.5 m north-south by 4 m east-west) located 15 m to the southeast of Feature A. The site is located on a flat mesa top above Water Canyon. Vegetation consists mostly of short grasses and scrub oak with a few ponderosa pine, piñon, and juniper trees present. Observations of the ceramics date this site to the Coalition period. The area around the site was lightly burned. There are four stump holes in the area, but these do not pose a threat to the site. There is a low erosional threat on the western portion of the site where pooling of sediments is occurring.

LA 15857. This site consists of an L-shaped pueblo roomblock (17 m north-south by 10 m east-west) and an associated artifact scatter. The site is located on top of a slight rise on a flat mesa top just south of the TA-37 access road in a lightly forested ponderosa pine, piñon, and juniper woodland. The roomblock appears to be two rooms wide and five rooms long with its long side oriented north-south and has an east-west width of 5 m. The northern end, with its addition room, measures 10 m east-west. Observations of the ceramics date this site to the Coalition period. The area around the site was slightly burned. There are about 10 to 15 partially burned scrub oaks in the area that soot damaged 3% of the masonry.

LA 15858. This site consists of a one- to two-room structure (4 m by 4 m, 0.3 m high) of roughly shaped tuff blocks (Figure 7.3). Despite being located adjacent to a building in the developed western part of TA-16, there was a fair sized stand of ponderosa pines and some smaller tree species growing on and around the site. The site is composed of lichen-covered, roughly shaped tuff blocks and rubble. No artifacts were



Figure 7.3. View looking south of LA 15858 with B. Vierra.

observed in association with this site. This site is Ancestral Puebloan. The area around the site was severely burned. Nearly all the trees in the immediate area were burned and several trees near the site could damage it if they fall. Sixty percent of the masonry is soot damaged and 10% is heat spalled. Many of the burned trees in the area have been cut down as part of the rehabilitation effort, but the trees immediately surrounding the site still stand.

LA 15859. This site consists of two features, a small ruin and an associated alignment feature. The first feature is a rubble mound composed of large tuff blocks. No alignments are visible at the rubble mound. This structure is approximately 6 m by 5 m and probably contains two rooms. The second feature is a scatter of tuff rubble with artifacts and two visible alignments of shaped tuff blocks. The second feature is approximately 2 m by 2 m and its function is unclear. This site is located on a gradual south-facing incline on the TA-16 mesa top. Approximately 300 m to the west is a deep drainage, which is south of the intersection of the TA-11 and TA-37 access roads. Site burn severity is low for these two features. There are stump and root holes within the site area. No suppression impacts were made to this site during the Cerro Grande Fire, and no treatment is recommended.

LA 21299. This site consists of a one- to three-room structure and associated artifact scatter. This site is located north of State Route 4 and south of Water Canyon, a power line is close to the site. The one- to three-room structure is constructed of shaped tuff blocks, and five rock alignments are visible. A lithic and ceramic scatter is present around the site and extends at least 20 m north from the structure. Some glazeware ceramics were located. Based on the ceramics present, this site dates to the Classic period. When the UCLA Pajarito Archaeological Research Project (PARP) first recorded this site, the one- to three-room structure was not located. The burn severity at this site is low. There is some cracking and spalling on the masonry, smoke and soot damage, and stump holes in the site area. There are no suppression impacts to this site, and no treatment is recommended.

LA 21300. This site consists of an artifact scatter located on a point above Water Canyon and at the end of an old dirt road. This artifact scatter primarily consists of lithics of Cerro Pedernal chert, obsidian, and rhyolite. Several smeared-indentated corrugated sherds were also recognized. The site is approximately 5 m by 5 m in size and about 30 artifacts were observed. PARP originally recorded this site as a pot drop but, based on the number of lithic debitage present, the site is considered a small artifact scatter. Site burn severity is low. There are only a few snags and partially burned trees in the site area. There are no suppression impacts to the site, and no treatment is recommended.

LA 21333. This site consists of a single rock alignment. This is a very questionable rock feature. The site has a single row of tuff blocks, 2 m long and 10 cm wide. The alignment runs in a north-south direction. One basalt flake was found 3 m west of the alignment. There are possible sub-surface features. Burn severity was moderate for this site. Fire effects consist of smoke and soot damage, stump holes in the site area, and additional snags and partially burned trees in the site area. There were no suppression impacts to this site, and no treatment is recommended.

LA 21367. This site consists of an Archaic period lithic scatter. The site is located on a mesa top just north and east of the intersection between State Route 4 and West Jemez Road. PARP had originally recorded and collected much of this site. All that is left today is a sparse obsidian and chert scatter. Burn severity is low at this site. The fire effects include stump and root holes in the site area and additional snags or partial burned trees in the site area. There were no suppression impacts to this site, and no treatment is recommended.

LA 21368. This site consists of a sparse lithic scatter, approximately 20 m by 20 m, and is comprised mostly of obsidian, 50% of which was collected in 1979 by PARP. This site is located in a ponderosa pine forest approximately 40 m east of State Route 4. There is a small stream channel that runs through the

middle of the site, increasing erosion effects. Based on obsidian being the sole lithic raw material and the absence of ceramics, this site is dated to the Archaic period. This site was in a low-burn area and the effects of the Cerro Grande Fire were minimal, only stump and root holes are in the site area. However, during the fire certain suppression efforts affected the site. A fire road was expanded, built by a bulldozer close to the site, and more than 30 burned trees were cut down in the site area.

LA 21369A. This site consists of two components: a lithic and ceramic scatter (LA 21369A) and historic structures (LA 21369B; see Chapter 12) measuring approximately 100 m north-south by 20 m east-west. The sherd and lithic scatter component is mostly comprised of obsidian flakes with some corrugated pottery sherds. In 1979, PARP collected five bifaces and approximately 50% of the lithic and ceramic scatter. The site has been extensively bulldozed and is disturbed by two roads running north-south and parallel to one another. The site burn severity is moderate. Stump and root holes exist adjacent to historic foundations and elsewhere in the site, and additional snags are in the site area. No treatment is recommended for this site.

LA 21370. This site consists of a small rubble mound of shaped tuff blocks (Figure 7.4). The mound may be recent or the blocks were cannibalized from another site in the vicinity. There are no visible remains of an old horseshoe were located. Due to the lack of artifacts, the site affiliation is undetermined. This site had been previously burned in 1977 during the La Mesa Fire. The site is located in a cleared meadow approximately 150 m north of State Route 4 and 40 m south of the Water Canyon cliff edge. The effects from the Cerro Grande Fire include stump and root holes adjacent to masonry, stump and root holes in the site area, and additional snags or partially burned trees in the site area. There were no suppression impacts to the site. No treatment is recommended for this site.



Figure 7.4. General view looking east of LA 21370 with J. Nisengard (left) and B. Harmon.

LA 86649. This site is an obsidian lithic scatter (380 m²) located on a gentle east-facing slope in a ponderosa pine forest 30 m west of a barbed wire fence. The head of a small drainage is immediately to the southeast and the mesa edge is located 30 m east of the site. Based on obsidian being the sole lithic raw material and the absence of ceramics, this site is dated to the Archaic period. The area was severely burned and there are a number of snags and stump holes in the site area. Due to the gentle slope the site rests on, there is a low erosional threat. A two-track dirt road runs through the eastern edge of the site.

LA 86650A. This site consists of a single cavate that faces southeasterly, situated in Water Canyon. The cavate is not very accessible and appears to be fairly eroded. No artifacts were observed below the cavate. There appears to be some possible hand and foot holds below the cavate but they are highly eroded. Site burn severity is moderate. The cavate itself doesn't appear to be affected by the fire but the forest in the

LA 86651. This site consists of a one- to two-room structure (8 m by 6 m) of well-shaped tuff blocks. It is located on a gentle east-facing slope incised by several small drainages in a ponderosa pine forest. No artifacts were observed on the surface. The area around the site was moderately burned. There are two stump holes in the site area, and two small scrub oaks have fallen onto the masonry. The site is on a small mound that is steep sided and is eroding down; only scrub oaks are helping to stabilize the site. Erosion of this site will continue at an increased rate because there is only a light layer of new duff.

LA 86652. This site consists of a one-room structure (1.5 m by 4 m) of roughly shaped tuff blocks. The site is located on a gentle east-facing slope incised by deep drainages in the canyon bottom. Vegetation in the area consists of ponderosa pine, piñon, and scrub oak. The masonry is not as linear as it may have been in the past due to the effects of natural erosion; tuff blocks associated with the site are moving downslope. When this site was visited in 1992 by LANL archaeologists, alignments were more visible. Based on the lack of visible artifacts, this site dates to Ancestral Puebloan. The area around the site was severely burned. There are four stump holes and two snags in the site area, but they do not pose a threat to the site. There is also a low erosional threat due to small, near-by drainages.

LA 86653. This site consists of a two-room structure (5 m by 3 m) of well-shaped tuff blocks (Figure 7.5). The site is located on a gentle east-facing slope incised by several small drainages in a ponderosa pine forest. The tuff blocks are well shaped and some are quite large. No coursing or alignments are visible. Approximately 25 artifacts were observed in association with this site, scattered over an area measuring 15 m north-south by 15 m east-west. This site is Coalition. The area around the site was moderately burned. There is one snag in the site area, and 20% of the masonry is soot damaged. There is also a low erosional threat due to the absence of duff that was burned off.

LA 86654A. This site consists of a one-room structure (2 m by 2.5 m) of large, well-shaped tuff blocks. The site is located on a gentle east-facing slope incised by several small drainages in a ponderosa pine forest. This structure is a small, square structure constructed of large, well-shaped tuff blocks. The mound is high and square. Most of the structure is still composed of two courses of wall that are exceptionally well preserved. Due to lack of artifacts, the site is classified as Ancestral Puebloan. The steep sides of the structure seem to be encouraging erosion activities; however, the scrub oaks growing out of the structure may be helping to curb extensive erosion. The area around the site was moderately burned. There are two stump holes and many snags in the site area, but they do not pose a threat to the site.

LA 86654B. This site is an apparent garden plot (3 m by 3 m) of a few unshaped tuff blocks. The site is located on a gentle east-facing slope incised by several small drainages in a ponderosa pine forest. This site consists of an apparent agricultural feature composed of a few shaped tuff blocks located 55 m northwest of LA 86654A. The blocks are stacked on edge and form an east-west alignment. A shallow, intermittent drainage is approximately 480 m to the northwest. This site is most likely Ancestral Puebloan

in age. The area around the site was slightly burned. There are four snags in the site area, and 10% of the tuff blocks are soot damaged.



Figure 7.5. LA 86653, J. Nisengard at the two-room structure impacted by the fire.

LA 86655. This site is a one-room structure (4 m by 3 m) of shaped tuff blocks (Figure 7.6). The site is located on a gentle south-facing slope incised by several small drainages in a ponderosa pine forest. This site is Ancestral Puebloan. The area around the site was severely burned. There are five stump holes and many snags in the site area, but they do not pose a threat to the site. Although there is minimal soot damage, 25% of the masonry is heat spalled. There is also a low erosional threat to the site.

LA 86656. This site is a two- to three-room structure (3 m by 3 m) of roughly shaped tuff blocks. The site is located on a gentle southeast-facing slope incised by several small drainages in a ponderosa pine forest. Based on ceramics observed by earlier surveys, this site dates to the Coalition period. The area around the site was moderately burned. There are four snags in the area and an additional snag that could damage the site if it falls. An old bulldozer firebreak not related to the Cerro Grande Fire has disturbed the eastern edge of the site (Figure 7.7).

LA 86657. This site is comprised of a pueblo roomblock (6 m north-south by 10 m east-west) and an associated artifact scatter. The site is located on a gentle southeast-facing slope incised by small drainages in a ponderosa pine forest. Clear alignments are visible in the center of the mound and on the north, south, and east sides. Copious amounts of wall fall and rubble are strewn downslope to the north, east, and south. The artifact scatter surrounding the site measures 30 m north-south by 35 m east-west. Based on ceramic observations of previous surveys, this site dates to the Coalition period. The area around the site was moderately burned during the Cerro Grande Fire. There are a number of burned trees in the area and

two stump holes, but these do not pose a threat to the site. Ten percent of the masonry is soot damaged. Rehabilitation efforts have occurred in the site vicinity. Wattles have been placed to the north and west of the site and straw has been spread around the site area. There is a low threat of erosion. For additional comments see the description of LA 204.



Figure 7.6. General view looking north of LA 86655 with K. Schmidt.

LA 86660. This site is a one-room structure (3 m by 2.5 m) of roughly shaped tuff blocks. The site is located on a flat mesa top north of Water Canyon near the TA-37 entrance at the western edge of an open field. Vegetation around the site consists of short grasses and a few ponderosa pines and scrub oak. The structure is comprised of a small, square rubble mound with visible wall alignments located on all sides. Additional tuff blocks are scattered 20 m to 30 m east of the structure. No artifacts were observed to be in association with this structure. Based on the construction style and materials, this site is of Ancestral Puebloan origin. However, all of the neighboring sites date to the Ancestral Puebloan Coalition period. The area around the site was slightly burned. There is one partially burned ponderosa pine that might damage the site if it falls, and 60% of the masonry was soot damaged during the Cerro Grande Fire. As the duff has burned off and the site is on a slight slope, there is a low erosion threat.

LA 86662. The site is a one-room structure (2.5 m by 2.5 m) of shaped tuff blocks and associated artifact scatter. The site is located on a fairly flat mesa top just north of Water Canyon near several large pueblo ruins and other features. Vegetation around the site consists of short grasses and a few ponderosa pine, piñon, and juniper trees. The masonry consists of shaped tuff blocks, and alignments are visible on the south and west sides of the 0.3-m-high mound. The westernmost alignment runs northwest-southeast and forms right angles with the north-south alignments. The total scatter size measures 5 m by 5 m and consists of several pieces of chipped stone along with associated ceramics. Based on the artifacts

observed and the other sites in the area, this site dates to the Coalition period. The area around the site was slightly burned, there are two stump holes in the area but they do not pose a threat to the site. There is a low erosion threat to this site.



Figure 7.7. General view of LA 86656, looking south. Note burned tuff blocks along the edge of an old bulldozed firebreak road.

LA 86687. This site consists of two east-west-running possible alignments of unshaped tuff blocks. The site is located on a small rise on a flat mesa top in open ponderosa pine forest north of Water Canyon. This site is comprised of two noncontiguous linear alignments of roughly shaped tuff blocks with additional tuff blocks and rubble scattered up to 10 m away. The two alignments at the site are separated by a 1.5-m space. The northern alignment is 1.8 m long and the southern is 2.3 m long. The tuff blocks could be the remains of a small structure that was salvaged or they could be part of a possible water control or agricultural device. No artifacts were located in association with this site. This site has been identified as an Ancestral Puebloan site. The area around the site was slightly burned and one block in the alignments is spalled.

LA 86688. This site consists of two features. Feature A is a 2-m by 3-m concentration of shaped tuff blocks. Feature B, located 25 m to the northeast of Feature A, is a one- to three-room structure that has been mostly destroyed by an old bulldozer cut. Well-shaped masonry blocks are scattered along 20 m of the cut. The site is located on a flat mesa top in an open ponderosa pine and scrub oak forest. Based on the size and shape of the masonry blocks, the site dates to the Classic period. The area around the site was slightly burned. Fifty percent of the masonry is soot damaged, and 10% is heat spalled. There is a low erosion threat from the bulldozer cut.

LA 86689. This site consists of a cairn and a petroglyph panel, 40 cm high and 40 cm wide. This site is located on a south-facing canyon edge above a talus bench just above Water Canyon. Vegetation in the area of this site consists of ponderosa pine, piñon, and scrub oak. The petroglyphs are located on a large boulder and have four different panels: A, B, C, and D. Petroglyph panel A contains animal images and faces southeast. Panels B, C, and D face southwest and contain images of hands, animals, human figures, and a circle. Each petroglyph has lichen growing in the pecked areas. The rock cairn is located directly above the petroglyphs. The rock cairn may be from a historic period based on the presence of a sixteen penny rusted wire nail driven into the bedrock immediately south. Lichen covers both the cairn and the bedrock with similar patterns suggesting that the cairn may be older than the Laboratory. The burn severity of the Cerro Grande Fire was low in the vicinity of this site. The scrub oak next to the petroglyph panel was not impacted, but a large piñon tree 7 m to the southwest of the panel did burn.

LA 87426. This site consists of an Archaic period artifact scatter. The site is situated on both sides of West Jemez Road. The portion of the site on the western side has been destroyed by debris from a flood in Water Canyon that settled over the site and was then removed. The eastern portion of the site is still present although impacted by the same debris removal in the western portion of the site. The intact portion on the site sits atop a small bench above the canyon bottom. Obsidian is the most common artifact type seen on the surface. The site burn severity is low. There are a few snags and partially burned trees near the site area. No suppression impacts were observed, and no treatment is recommended.

LA 87427. This site consists of an Archaic period artifact scatter. This site is located next to West Jemez Road on a small ridge top in a ponderosa pine forest with some piñon and juniper in the area. The site is approximately 82.5 m by 34.5 m in size with the largest concentration areas measuring 20 m by 15 m. The site is comprised mostly of obsidian flakes with a few flakes of chert present. Two broken biface tools were observed. Site burn severity is moderate and left some burned stump and root holes in the site area. Suppression impacts consist of tree felling in the site area. Erosion is also a threat to this site because of the runoff from the site to West Jemez Road. Some heavy equipment has been driven over this site. Recommended preservation treatment includes monitoring and fencing to prevent future impact.

LA 122031. This site consists of multiple components including an Archaic period lithic scatter, a historic artifact scatter, and some tuff blocks. The site size is approximately 34 m east-west by 27 m north-south. The site is located in a mixed ponderosa pine and piñon-juniper woodland approximately 225 m west of West Jemez Road and west of building TA-16-205. The lithic artifacts are thought to date to the Archaic period. The historic artifacts in the site area date to the Statehood-World War II period. Both rock features are unknown as to function and cultural affiliation. The site burn severity is moderate. The only effects left by the fire are stump and root holes in the site area, snags and partial burned trees that can damage structures, and additional snags in the site area. Rehabilitation at this site consisted of the removal of burned snags. Treatment recommendations for this site consist of filling the stump and root holes.

LA 126547. This site is a possible petroglyph panel (about 0.5 m by 0.5 m) on a small south-facing ledge face overlooking a broad bench above Water Canyon. The site is of Ancestral Puebloan origin. A number of scrub oaks are growing in the vicinity of the site. The petroglyph resembles a human figure but has eroded or it was never completed. The area around the site was slightly burned and some of the ledge face near the petroglyph panel has been soot damaged. A large ponderosa pine tree located 5 m north of the petroglyph did burn during the Cerro Grande Fire.

LA 136667 (BCH-3). This site consists of a light Archaic period obsidian scatter. The lithic scatter is located along a recent dozer cut along a power line in TA-16. The burn effects at the site are low. There are stump and root holes in the area and additional snags in the site area as a result of the Cerro Grande Fire. Suppression impacts to the site consist of dozer lines, tree felling, and vehicle ruts. No treatment is recommended for this site.

LA 136879 (WBM-7). This site consists of an unidentified prehistoric obsidian scatter, about 40 m north-south by 45 m east-west. A two-track dirt road is immediately south of the site. Burn severity at this site is low. There are no apparent suppression impacts to this site, and no treatment is recommended.

LA 136905 (K-166). This site consists of a small mound with shaped and unshaped tuff blocks (Figure 7.8). It is located in a ponderosa pine forest and is approximately 30 m by 30 m in size. No artifacts were identified at the site, so it has been classified as Ancestral Pueblo. The site burn severity is moderate, and fire effects at the site include cracking and spalling of masonry, smoke damage, and stump and root holes in the site area. Some of the burned tress in the site area were removed, and no treatment is recommended.



Figure 7.8. General view of LA 136905 after flagging, looking southeast.

TA-37

LA 4653A. This site consists of a small pueblo roomblock situated on the north side of the TA-37 mesa top and north of bunker 37-11, which is inside the fence. There is a small access road that runs on the south side of the site. This pueblo roomblock measures 30 m by 10 m. This long, narrow roomblock is composed of well-shaped tuff blocks. Walls two to three courses high are visible in the southern and northeastern areas of the mound. There are also numerous alignments and corners visible. Artifacts observed include Santa Fe Black-on-white, plainware, smeared-indentured wares, basalt, and obsidian. Based on the ceramics observed, this site dates to the Coalition period. Fire effects at this site are low as a result of the Cerro Grande Fire and are comprised of cracking and spalling on masonry, smoke and soot damage, snags and partial burned trees that can damage structures, and additional snags and burned trees in the site area. There were no suppression impacts to this site. Removal of dead and burned trees at the southwest corner of the mound is the recommended treatment for this site.

LA 4653B. This site consists of a small two-room structure of long, well-shaped tuff blocks. There are visible alignments and walls up to three courses high. The mound is approximately 4 m by 2 m. The northern room of the structure displays evidence of pothunting. A few tuff blocks are scattered 15 m to the north and northwest of the structure, and a low mound of earth was noted 15 m north of the structure. This site is approximately 30 m east of LA 4653A and has similar artifacts present. Based on the ceramics, this mound dates to the Coalition period. Effects of the Cerro Grande Fire are low and consist of snags or partial burned trees in the site area along with a fallen tree on the rubble mound. There were no suppression impacts to this site. The treatment recommended consists of the removal of a standing, but dead, tree and the single tree that is laying across the rubble mound.

LA 4654A. This site consists of a small pueblo roomblock located near the south edge of the TA-37 mesa top that overlooks Water Canyon. The site is approximately 15 m by 13 m, and alignments are visible in the central area of the structure. The tuff blocks are well shaped and unusually large. A chain link fence deviates around the mound on the south side of the site (Figure 7.9). Some bulldozing is evident in this area. The large majority of the roomblock component of this site, despite having been damaged by the fence construction, is undisturbed. Artifacts observed include Santa Fe Black-on-white, some corrugated utility ware, basalt, chert, and chalcedony. Based on the ceramics observed, this site dates to the Coalition period. The effects of the Cerro Grande Fire are moderate and consist of cracking and spalling of masonry, smoke and soot staining, snags and partial burned trees that can damage structures, and additional snags and burned trees in the site area. There were no suppression impacts to this site during the fire. The removal of a burned and dead tree from the center of the rubble mound is recommended treatment for this site.



Figure 7.9. LA 4654A; the tree in the center of the rubble mound is recommended for removal.

LA 4654B. This site consists of a pueblo roomblock that is located immediately outside the perimeter fence on the southern edge of the TA-37 mesa top in a ponderosa pine forest. The site is situated on a mesa edge 7,250 ft in elevation. Feature A is a rubble mound of shaped tuff blocks, 8 to 10 rooms, that measures 25 m north-south by 12 m east-west. The north and south ends are taller than the middle. Rock alignments are clearly visible along the western and northern edges. Considerable mechanical disturbance was noted on all sides of the ruin. To the east of the roomblock is a 25 m by 10 m earthen berm, this is probably backfill from the TA-37 bunker excavation. It is likely that this berm covers most of the site's midden area. Feature B is located 50 m southeast of the rubble mound on the edge of the mesa. LA 4654B was slightly burned during the Cerro Grande Fire. Two partially burned ponderosa pine trees are growing in the rubble mound. If they die and fall over they could cause serious damage. It is recommended that this site be monitored to determine the condition of the burned trees.

LA 4654C. This site consists of two petroglyphs and a set of stairs located on the mesa edge. The first feature is a series of hand and foot holds that lead down a south-facing ledge to a bench that overlooks upper Water Canyon. The two petroglyph panels are located 10 m west of the stairs. The petroglyph panels consist of two figures carved into the tuff cliff. The first panel depicts a humanlike figure, and the second panel depicts a quadruped with a long tail. The panels are approximately 3 m apart. Some of these scrub oaks in the vicinity burned during the Cerro Grande Fire. The area in which the site is located has been slightly burned and left some soot on the cliff walls near the petroglyphs; but neither the stairs or the petroglyphs appear to have sustained any fire damage. No recommendations were made for treatment.

LA 12655. This site, known as *Nake'muu*, consists of a plaza pueblo (with about 50 rooms) with standing walls. It is located at the end of a mesa overlooking Water Canyon and Cañon de Valle. The shaped tuff masonry walls are in fair to good shape, standing up to about 6 ft in height. The pueblo was built directly on bedrock. The isolated location of the site has protected the site from outside visitors, although there are a few recent fire circles that may date to the 1930s and be associated with the Los Alamos Boys Ranch. Very few artifacts are visible on the surface of the site. The ceramics observed date the site to the Coalition period, but the architecture style looks more like what one would see in the Classic period. The site was originally recorded by Hewett in the early 1900s and revisited by Steen in the 1970s. *Nake'muu* consists of two separate roomblocks that enclose a central plaza area. Approximately 23 rooms are situated in the northwest block and about 35 in the southeast block. There are no obvious surface indications of kivas, but Steen's map denotes the presence of a kiva at the north end of the plaza and to the west of the site. The pueblo walls are constructed of shaped tuff masonry blocks with adobe mortar and chinking stones. Two rooms still contain some adobe plaster on the walls. The site burn severity at *Nake'muu* is moderate. The fire effects at the site include cracking and spalling on masonry, smoke and soot damage to masonry, stump and root holes adjacent to masonry, additional stump and root holes in the site area, and partial burned trees that can damage structures. There were no suppression impacts to this site. Rehabilitation at this site includes the felling of two burned trees and the placement of wattles and straw to slow erosion. Treatment is recommended for stabilization of this site.

Non-Fire Related Impacts to Prehistoric and Temporally Unplaced Sites

Some sites within ESA were damaged by different means and not as a direct result of the Cerro Grande Fire. Assessment efforts also included the documentation and recording of damage sustained either as an indirect result of fire activities or from other factors. Damage to these sites occurred, or is currently occurring, primarily due to erosion activities. Table 7.3 lists the prehistoric and temporally unplaced sites in ESA that are currently sustaining damage from non-fire related impacts.

Table 7.3. Prehistoric and Temporally Unplaced Sites in ESA with Impacts not Related to the Cerro Grande Fire.

Technical Area	LA or Temporary Number	Non-Fire Related Impacts
16	204	Moderate to high level of erosion
16	15856	Low level of erosion
16	21368	Moderate to high level of erosion due to its location near an active drainage
16	86651	Moderate to high level of erosion due to its location on a steep slope
16	86652	Low level of erosion
16	86654A	Low level of erosion
16	86662	Low level of erosion
16	87426	Moderate to high level of erosion due to active drainage near the base of Water Canyon
16	87427	Low level of erosion due to active drainage near site

Recommended Treatments for Prehistoric and Temporally Unplaced Sites

Treatment is recommended for 12 sites located in ESA (Table 7.4). The technical area in which the site is located, the site type, the type of action suggested for the site, and a general description of the action are all included in the table. The sites impacted by the Cerro Grande Fire and situated in ESA will be subject to continued monitoring and protection. Those sites selected for treatments should receive treatment within the next year (see Chapter 13).

Table 7.4. Prehistoric and Temporally Unplaced Sites with Recommended Treatment in ESA.

Technical Area	LA or Temp Number	Site Type	Type of Action to be taken at Site	Recommended Treatment
11	86659	Fieldhouse	Treatment	Place wattles to prevent further erosion
16	86651	Fieldhouse	Treatment	Place wattles to prevent further erosion
16	86660	Fieldhouse	Monitor	Monitor site on erosion
16	86688	Fieldhouse	Treatment and Monitor	Monitor site and test to determine eligibility of site due to bulldozer damage
16	87427	Lithic Scatter	Treatment and Monitor	Monitor activity near site. Fence site to prevent future damage by vehicle activity near site
16	122031	Lithic Scatter	Treatment	Remove snags from site area
37	4653A	Roomblock	Treatment	Remove burned snags from site
37	4553B	Fieldhouse	Treatment	Remove snag and fallen tree from site
37	4654A	Roomblock	Treatment	Remove snag from site
37	4654B	Roomblock	Treatment and Monitor	Remove snags that may damage structure. Monitor site
37	12655	Plaza Pueblo	Treatment	Place wattles in site area to slow erosion

